DRAVA RIVER VISION

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Restoration of Szaporca oxbow system at Drava River

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Pécs

Hungary

Natural features of Hungary concerning rivers

- ***Basin*** **character:**

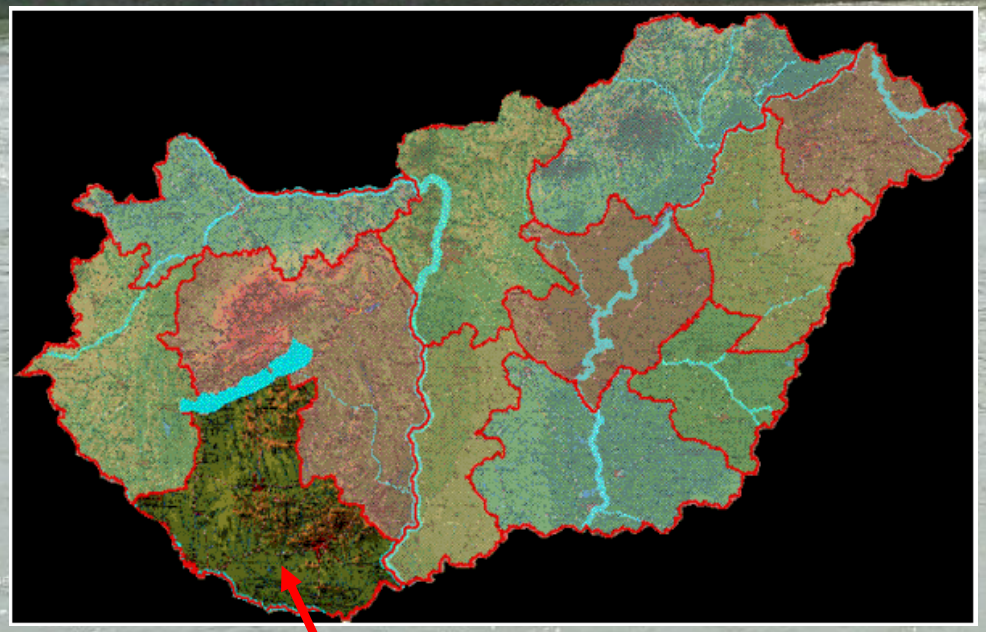
  Carpathian Basin

- **94 % of the surface water comes from neighbouring countries**

- ***Main rivers*****: Danube, Tisza and Drava**

- ***Main lakes*****: Lake Balaton, Lake Velence, Lake Fertő**

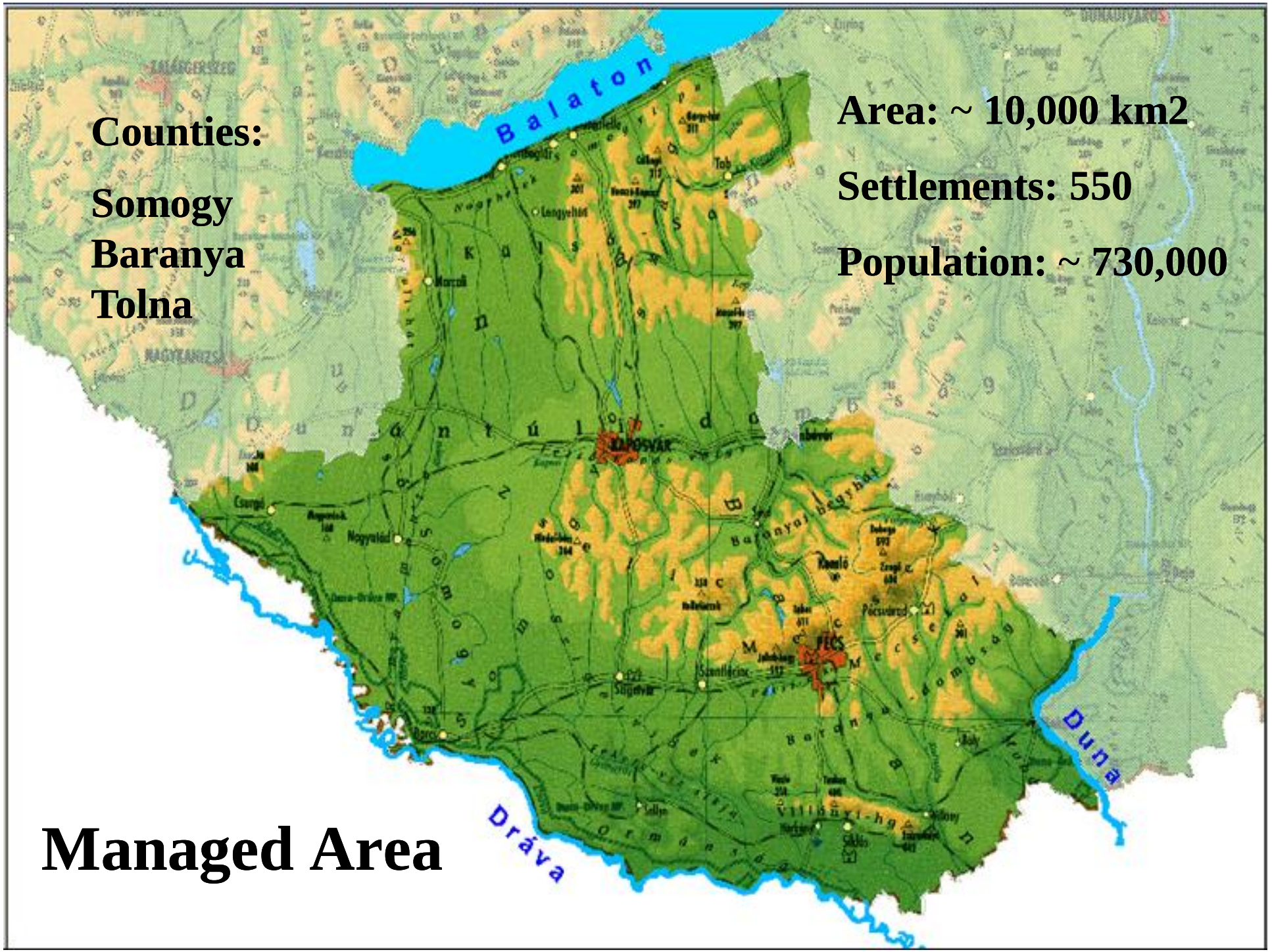
South-Transdanubian Environment Protection and Water Management Directorate



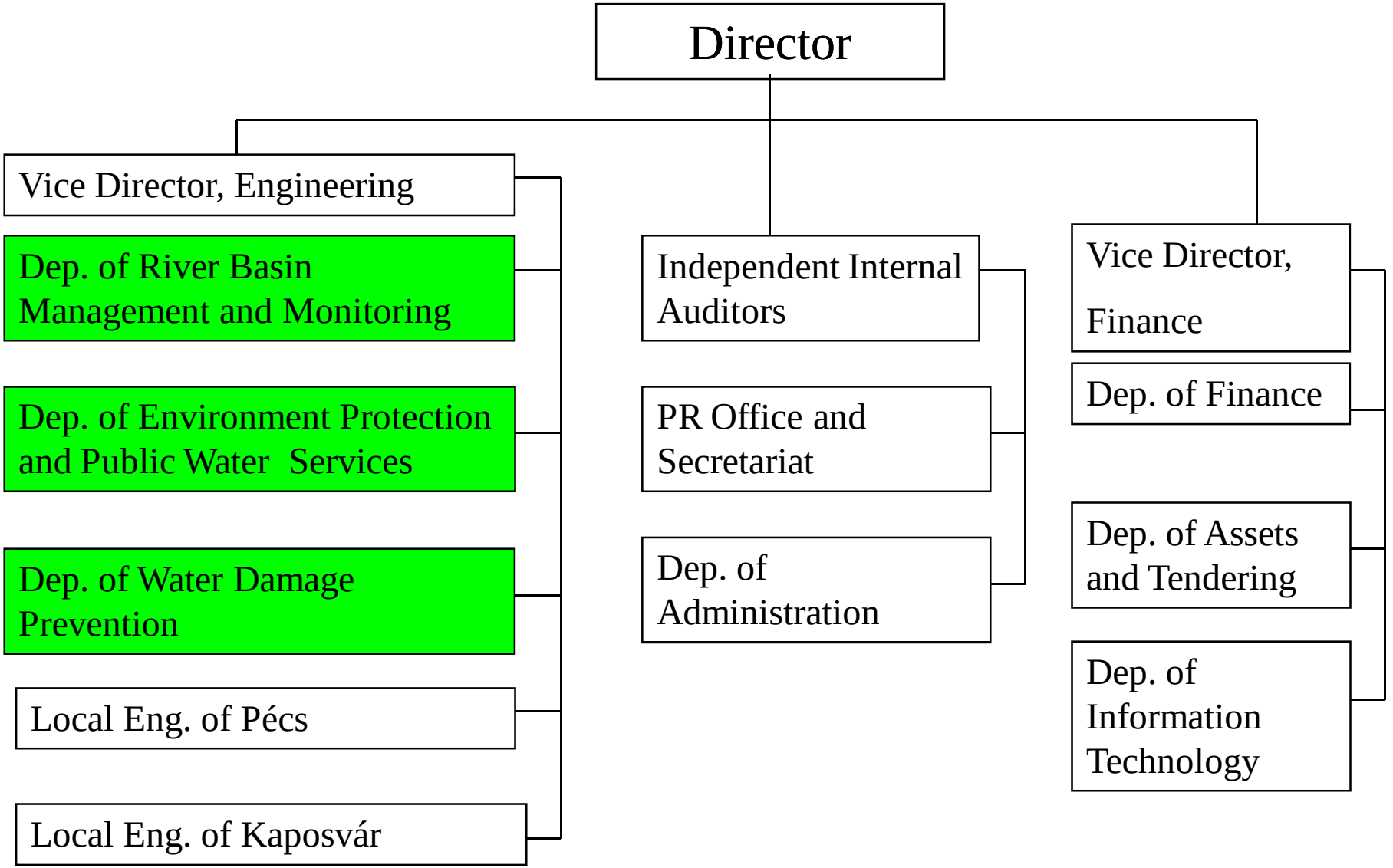
Managed Area

KÖVIZIG PÉCS

- 12 special agencies of regional administration
- Not authorities
- 187 employees at our Directorate



Structure of the Directorate



Our Tasks

Management tasks:

- Flood protection
- Maintenance of rivers
- Water resource management
- River basin management
- Hydrological monitoring
- Regional charges with public water utilities and waste water
- Ship navigation assignment
- Implementing of WFD

Expert assistance in state and EU administration

Services, consulting

National and international tenders (INTERREG, SEE, CE projects)

Location of Szaporca Oxbow System

At the South-

Transdanubian Region

close to the Hungarian-

Croatian border

More than 20 oxbows

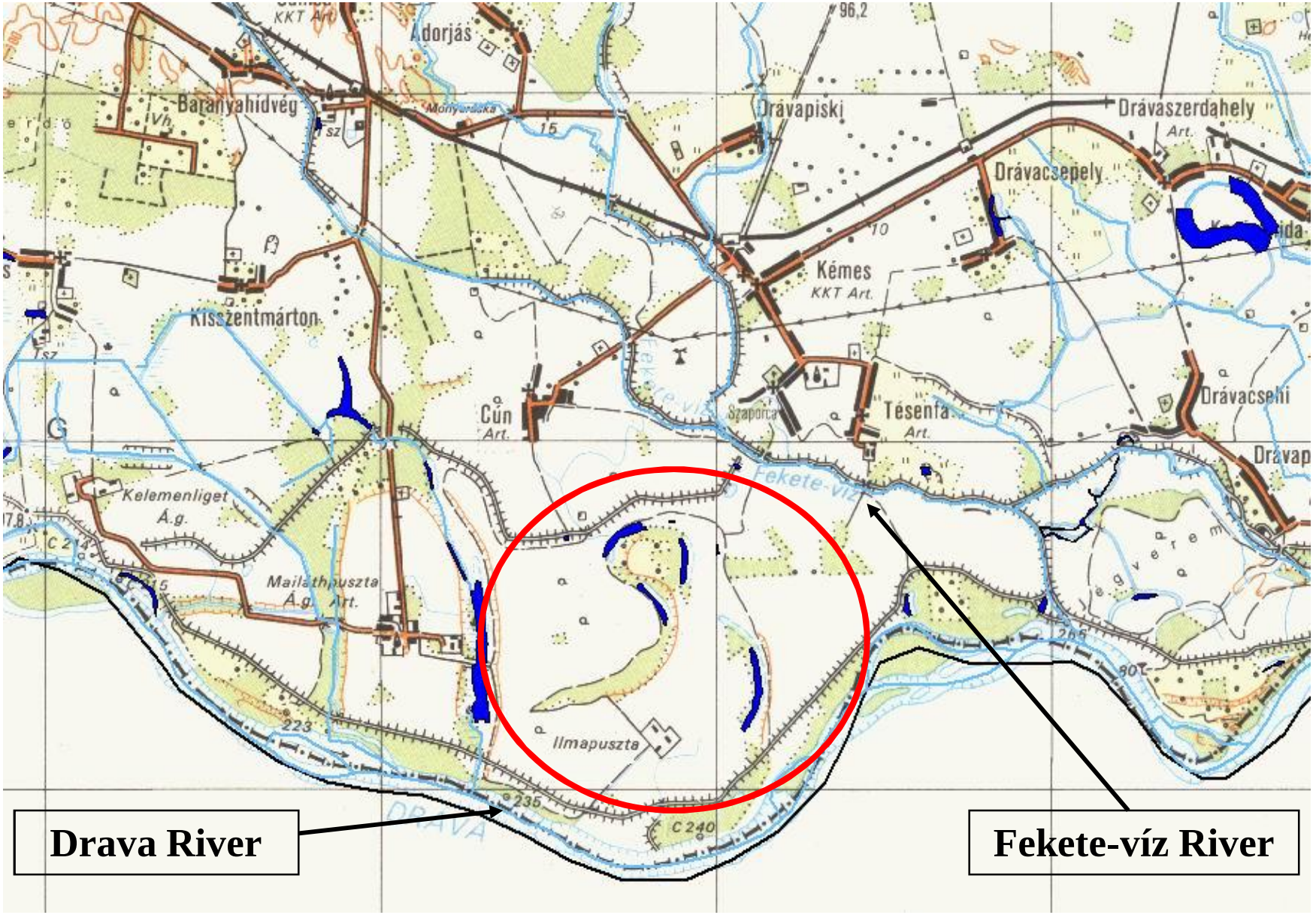
along Drava River!

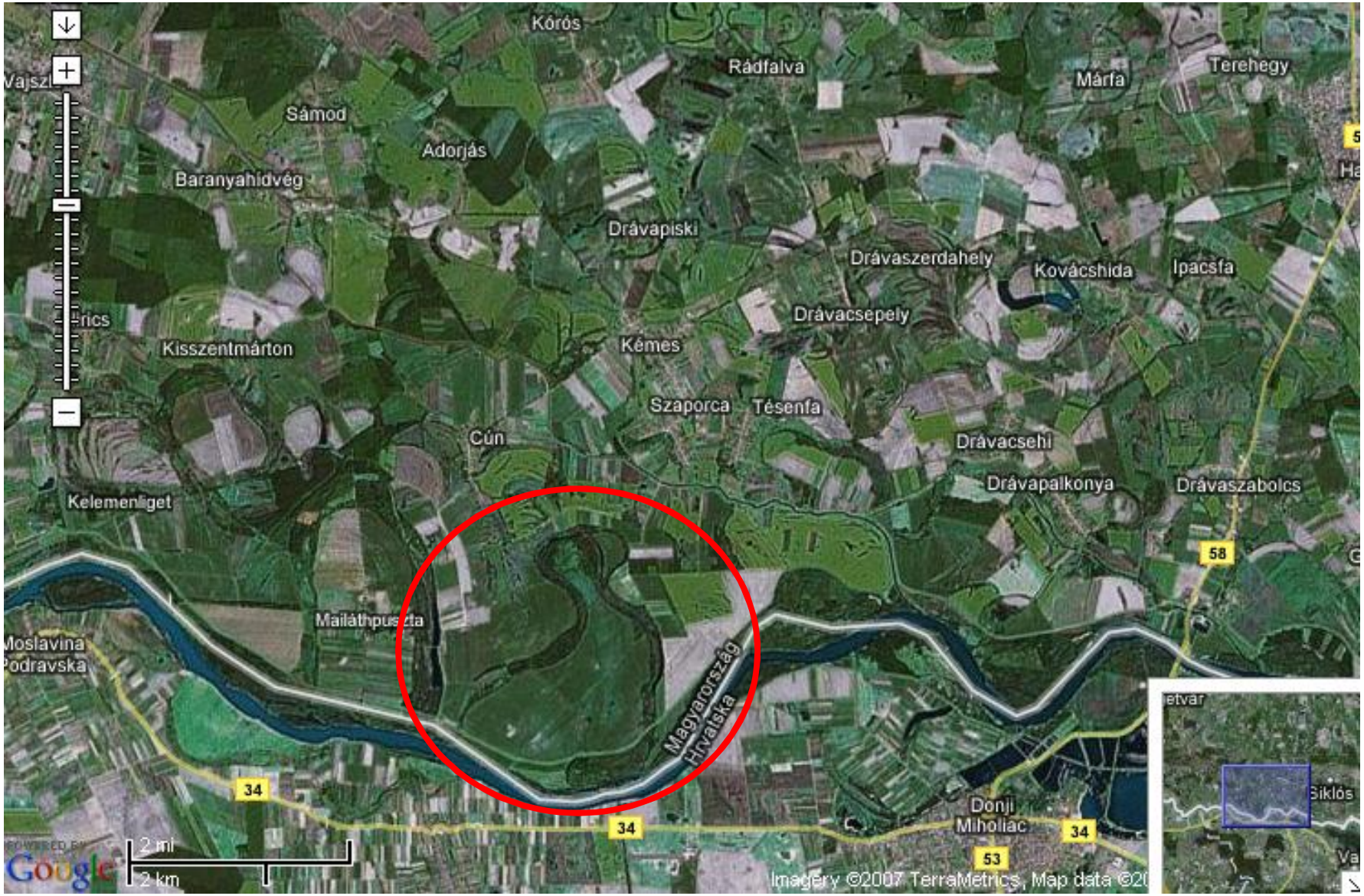
Features of Szaporca Oxbow System

- Originally it was the main bed of Drava River
- Due to meandering it became a full-developed and got loose from the River

- After the flood in 1975 a flood dyke was built and the connection broke off the River
- Only a small sluice keeps touch with the Drava River during high water levels
- Due to river bed deepening and changing in water flow: high water levels are infrequent

The Szaporca Oxbow System now

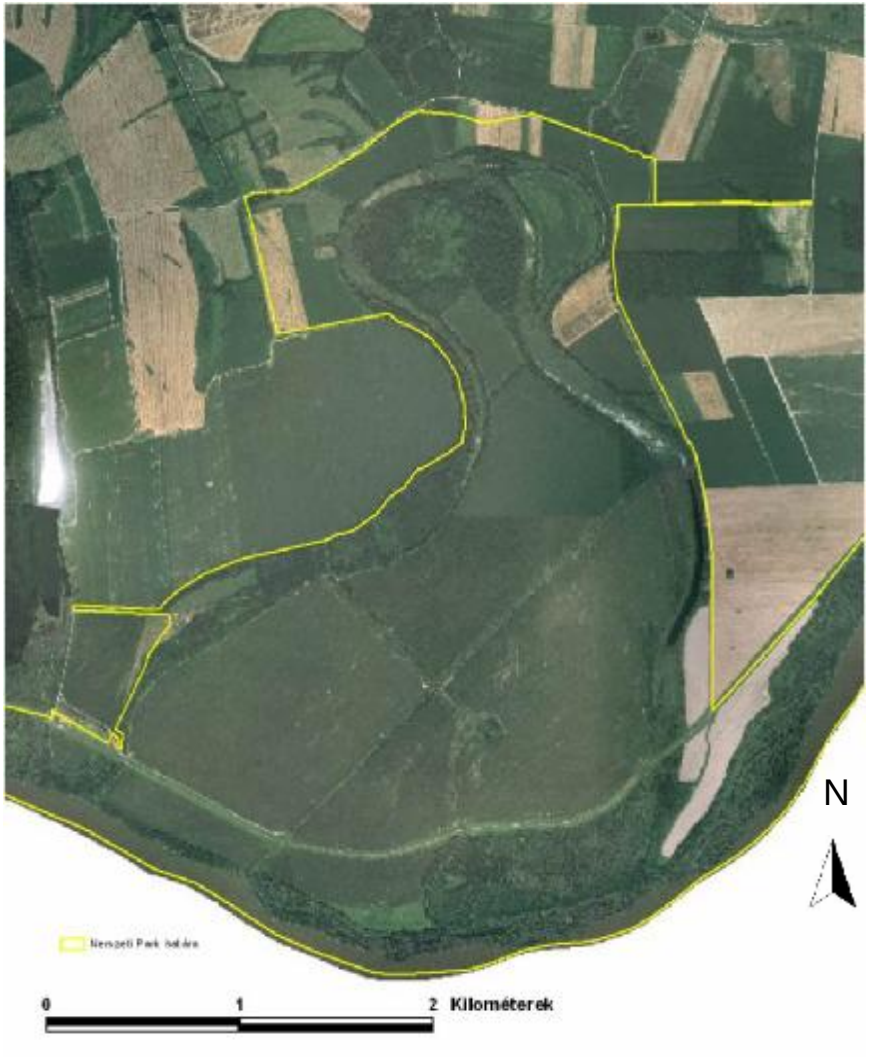




A great amount of oxbows and small undeveloped villages

No industrial activities ⟶ nature-close environment

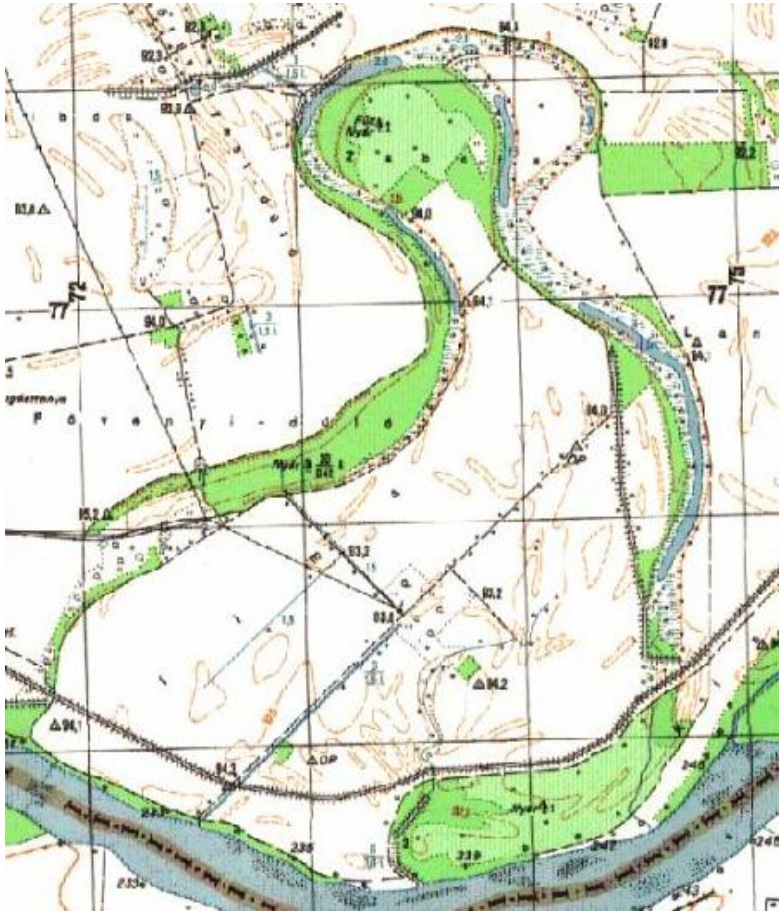
Restoration of the Szaporca Oxbow system as an INTERREG project



Features of the oxbow:

- 20 km2
- 36 ha
- 4 small oxbow-lakes
- **Ramsar** area
- **NATURA 2000** site
- natural conservation area
- **Danube-Drava National Park** area

Problems and aim



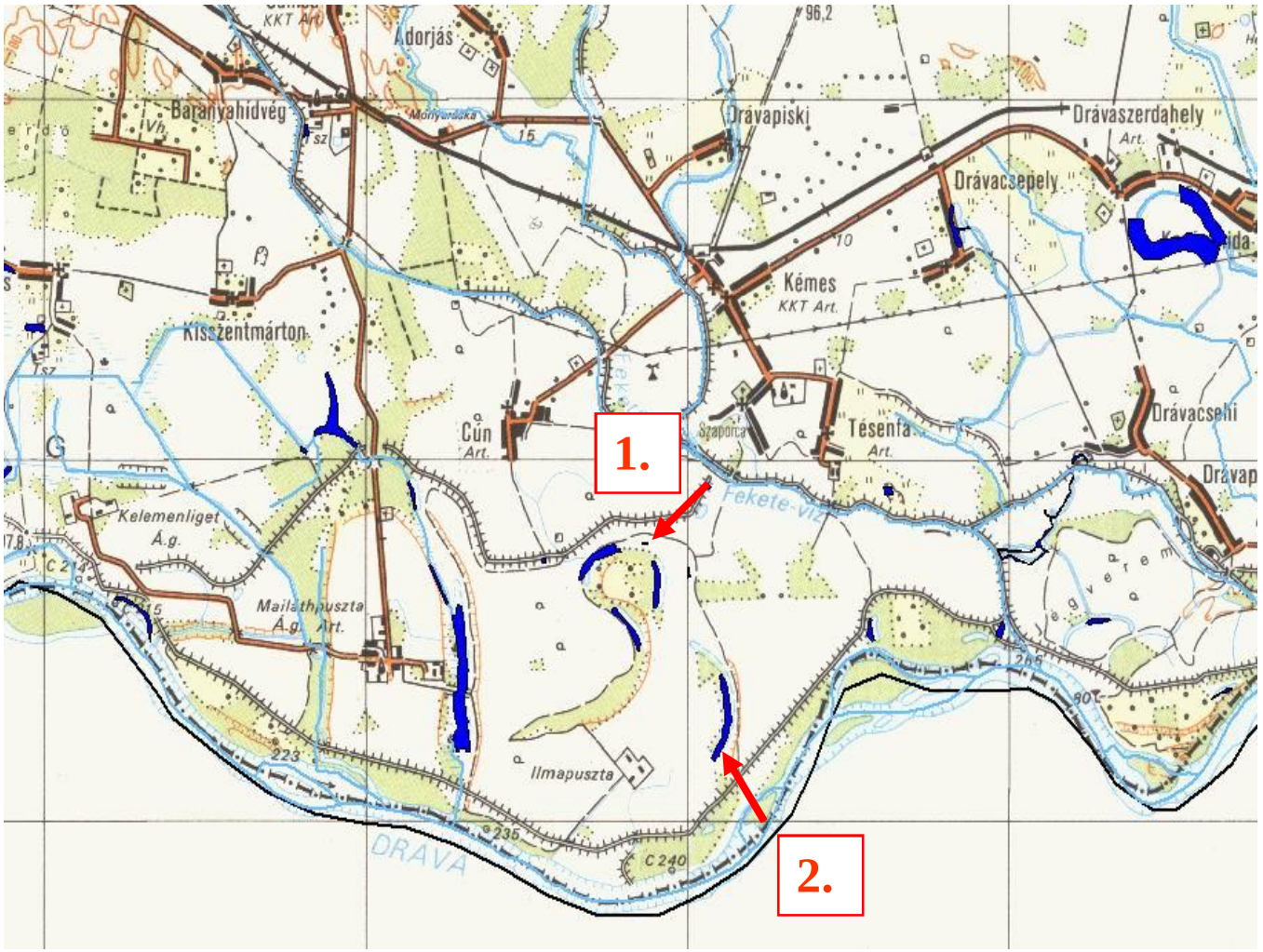
Problems:

- **Loss of connection** to the main river bed because of low water levels
- **Sedimentation**
- **Significant degradation** of a valuable habitat for fish and migratory birds

Aim: to restore the oxbow by water supplement

- **sustainable water management**
- **to enhance the habitat**
- **natural conservation**
- **reconsideration of land use**
- **rural development (recreation, eco-tourism etc.)**

Water supplement possibilities



Version One:

From **Fekete-víz River** by gravitation

Version Two:

From **Drava River,** pumping station is needed

Advantages of the project: better water quality in the oxbow system

Version One has been already investigated

Water supplement from Fekete-víz River can be designed well

A flow measuring structure provides:

- long term water discharge data from 1960
- from 1998 digitalized data collecting

Characteristics of Fekete-víz River:

- catchment area: 1185 km2
- dry-weather flow: 0,178 m3/s
- mean water flow: 4,541m3/s
- high water level flow: 62 m3/s

Technical details of the planned water supplement from Fekete-víz River

- Water supplement by gravitation (advantage)
- Water intake structure
- 6 water management artifacts
- 6 km long ditch
- 650 m long road
- Enhancing dykes on 1300 m long

- Approx. 10 km long natural friendly river bed adjustment
- Purchasing 12 ha of territory

Positive effects of restoration

- Protecting ecological values: oxbow lakes as habitats
- Protecting or even enhancing biodiversity
- Enhancing natural conservation
- Would effect positively the economy as well:
    - eco-tourism (fishing, cycling etc.)
    - population-retain accomplishment would increase
    - would help on this rather undeveloped region of Hungary